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Shri. Dadasaheb Gawal Charitable Trust Amravati's  
**Takshashila Mahavidyalaya, Amravati**



**Department of Chemistry**

**Session: 2023-24**

**Project**

**on**

**Investigation Environmental Chemistry**

**Name of Student: Suhani Sunilrao Gadling**

**Class: B. Sc II**

**Semester: IV**

**Guided By**

**Prof. Swati Gawai**

# Takshashila Mahavidyalay Amravat

2023 -2024



**Department Of Physics**

**A Seminar  
On  
Photon Gas**

**Name : Adnan Parvez**  
**Subject: Physics**  
**Topic Name: Photon Gas**

**Class: Bsc II (Sem III)**  
**Date : 23/10/2023**

**Guided by:**  
**-Prof: Amol More**



Subject: \_\_\_\_\_ Date: \_\_\_\_\_ Page: \_\_\_\_\_

## Introduction

The word Perfume used today is derived from the Latin word "Perfirmum" meaning through smoke. Perfumery, or the art of making perfumes, began in ancient Mesopotamia and Egypt but it was developed and further refined by the Romans and Persians. In ancient times, dubs of fragrance helped a person smell more pleasing.

Nowadays, we use fragrances in the form of perfumes, deodorants, lotions, hair products, soaps and cosmetics to please, attract people. Perfume is associated in many cultures with the essential sensual of life.

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- Introduction.
- History.
- Notes in Perfume.
- classification of perfume
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- composition of perfume
- manufacturing of perfume.
- Reference.



**Shri. Dadasaheb Gawai Charitable Trust**

**Takshashila Mahavidyalaya, Amravati.**



Department of Chemistry

Session: 2023-24

Project Report On

Analysis of Aromatics in Perfume and Fragrances

Name of Student : Shruti S. Mhasane

Subject : Chemistry

Class : B.sc.III rd year

Semester : VI (CBZ)

Date :

**Guided By**

Prof. Swati Gawai

Subject: \_\_\_\_\_

Date: \_\_\_\_\_

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## • INTRODUCTION

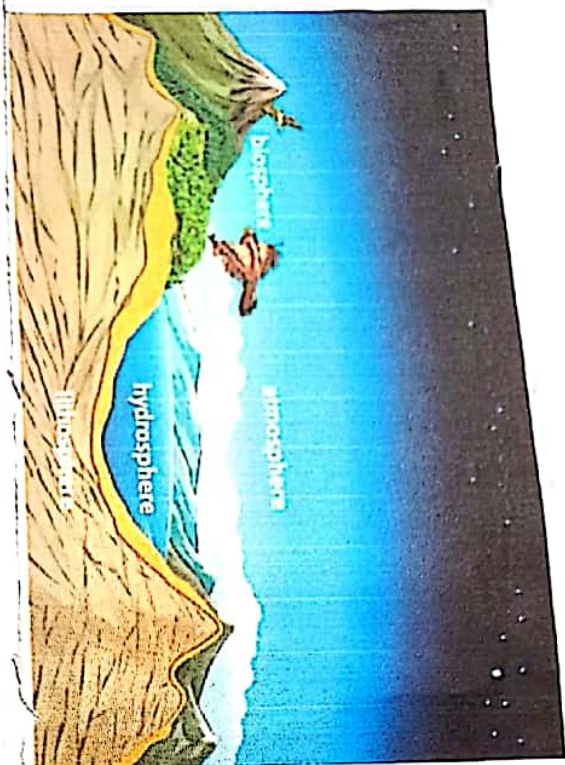
- The term "Environment" literally means "Surrounding".

It Comprises of the following four major Components:-

- 1) Atmosphere
- 2) Hydrosphere
- 3) Lithosphere
- 4) Biosphere.

- "ENVIRONMENT CHEMISTRY" is

a branch of science which deals with the chemical phenomena occurring in the environment, i.e. the study of origin, transport reactions, effects and fates of chemical species in the environment.





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TAKSHASHILA MAHARAJGALADA AMRAVATI

DEPARTMENT OF CHEMISTRY

CLASS  $\rightarrow$  BSC - III (SEM VI)

Project Report submission 2022 - 24

Project Topic  $\rightarrow$  Study of spectroscopy  
Technique for chemical Analysis

Submitted by  $\rightarrow$

Name  $\rightarrow$  Tushar Baburao Mahure

Sub  $\rightarrow$  Chemistry

Class  $\rightarrow$  BSC III (SEM VI)

Guided By  $\rightarrow$

Prof - Swati Gawas



SHRI DADASAHEB GAWAI CHARITABLE TRUST, AMRAVATI

TAKSHASHILA MAHAVIDYALAYA, SHAM NAGAR, AMRAVATI

2023-2024



DEPARTMENT OF CHEMISTRY

PROJECT

On

Study of Spectroscopic techniques  
for chemical Analysis

NAME- Tushar B. Mahure

CLASS- B.sc. 3<sup>rd</sup> year( sem-VI<sup>th</sup> )

SUBJECT- Chemistry

DATE - 13 - 4 - 24

Guided By-

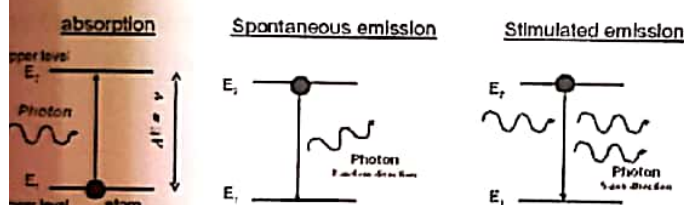
Prof.- Swati Gawai



# The PHOTON GAS

The absolutely crucial difference between (i) a gas of  $^4\text{He}$  atoms or, eg., massive mesons and (ii) a gas of photons is that, while all of these are bosons, the photons are massless (they have no rest mass, and their dispersion relation is  $\omega = ck$  (with energy  $E = \hbar\omega/2\pi$ ). This leads to a really important result – we know from thermodynamics that

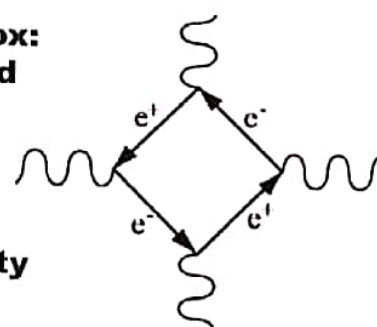
$$\mu = \left( \frac{\partial U}{\partial N} \right)_{S,P} \quad \text{or that} \quad \mu = \left( \frac{\partial F}{\partial N} \right)_{T,P} \quad \text{or that} \quad \mu = \left( \frac{\partial G}{\partial N} \right)_{T,P} \quad \text{ie., no matter which variables we hold constant, } \mu \text{ measures the energy to add a particle}$$



But a key fact about the photon gas is that in equilibrium with, eg., a set of atoms, the photon number is arbitrary; one can change the number of photons without changing the total energy.

Thus at equilibrium (where one of these thermodynamic potential is minimized), we have  $\mu = 0$ , and  $N$  is completely undetermined.

This is true even if for a set of photons inside a very large box: the box itself is made of matter, & so photons can be created or destroyed at the walls. To decouple photons from matter we need a perfect vacuum (ie., intergalactic space). The photon number is then conserved – it can only change via photon-photon interactions, which require creation of a very high-energy  $e^+e^-$  pair, with exponentially small probability of order  $\exp[-2mc^2/kT]$ . Only then we can have non-zero  $\mu$



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- ★ Mean /Average Velocity
- ★ Root Mean Square Velocity
- ★ Maxwell Expression

CERTIFICATE

Shri.Dadasaheb Gawai Charitable Trust Amravati

Takshashila Mahavidyalaya

Amravati



Department of Physics

Session 2023-2024

Seminar Report on

KTG Mean Free Path

Name. :- Subodh Rajesh Bhalchakra

Subject :- Physics

Class. :- BSC II year Sem (III)

Guided by :- prof.Amol More



## Introduction :-

If any two structures or organs perform similar functions but are structurally different, they are analogous structures or analogous organs. Opposite to analogous organs are homologous organs.

Homologous organs are the organs that are structurally similar to each other but perform different function.

Homologous organs, like the forelimbs of different vertebrates, have the same basic structure but different function.

Analogous organs like the wings of insects, pterodactyls, birds & bats, have similar function but different structural origin & details.

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Shri. Dadasaheb Gawai Charitable Trust Amravati's

**Takshashila Mahavidyalaya,  
Amravati**



**Department of Zoology**

**Session: 2023-24**

**Project Topic On**

**Analogous and Homologous Organs  
in animal**

**Submitted By : Kunal R. Bagde**

**Class: BSC III ( SEM VI)**

Guided by Prof. Komal

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## Introduction $\rightarrow$ Spectroscopic Techniques

Spectroscopy involves the identification of a sample by recording how it interacts with certain type of energy. Different spectroscopic methods use different wavelength of the electromagnetic spectrum as energy sources and these different energy type cause different reactions in the atomic and molecular structure of the sample. For example, infrared radiation causes vibrational excitation of the bonds in the larger molecules and nuclear magnetic resonance spectroscopy used radio waves as an energy source. Analytical techniques include mass spectrometry which is destructive techniques that produced quantity evidence. There are three basic type of spectroscopy.

Atomic absorption Spectroscopy (AAS)

Atomic emission Spectroscopy (AES)

Atomic fluorescence Spectroscopy (AFS)



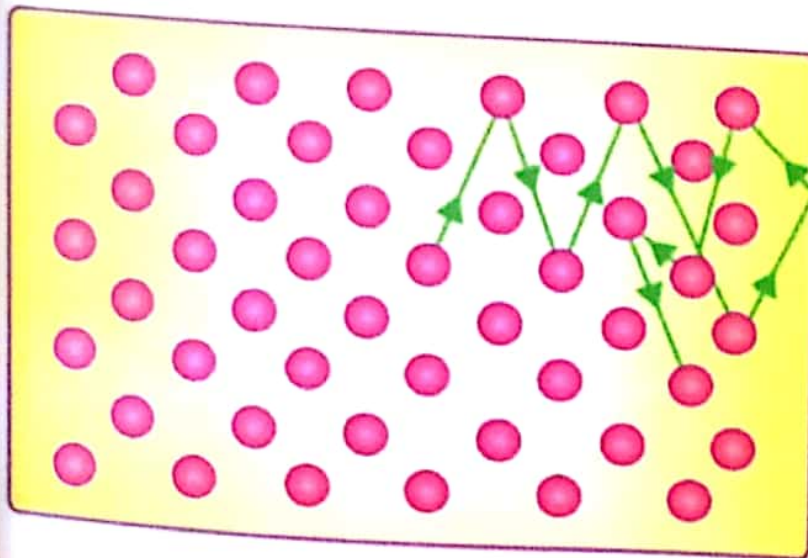
# Mean Free Path

Mean free path refers to the average distance that a moving particle travels between successive collisions or impacts. Furthermore, the successive collisions result in modification of the moving particle's energy or direction or any other particle properties. Moreover, the moving particle here refers to a molecule, an atom, or a photon.

## Introduction to Mean Free Path

In the field of radiography, the pencil beam of mono-energetic photon shall have a mean free path. Furthermore, this mean free path is the average travelling distance of a photon between collisions with the target material's atoms. Moreover, this means that the free path is dependent on the material as well as the energy of the photons.

In electronics, a charge carrier's mean free path of electrons in a metal is proportional to the electrical mobility. Furthermore, electrical mobility is a value that has a direct relation to the electrical conductivity



Random path followed by a gas molecule

**“A Financial Study of Women Self Help Group  
in Amravati District”**

Research Project Report

**Neha Sunil Dhoke**

M.com Program (2022-2024)

Under the guidance of  
**Mr. Mohit Rathod Sir**

**To**  
**SANT GADGE BABA AMRAVATI**  
**UNIVERSITY AMRAVATI**

In partial fulfillment of the requirements  
For The Award of Degree of  
**MASTER OF COMMERCE**

**\*Through\***

**Department Of Commerce**

**TAKSHSHILA MAHAVIDYALAYA, AMRAVATI**  
**2023-2024**





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## CERTIFICATEE



This is to certify that the research entitled,  
**A Financial Study of Women Self Help Group in Amravati District**

Submitted by,  
**NEHA SUNIL DHOKE**

In partial fulfilment of the conditions for the award of degree of Master of Commerce to the Sant Gadge Baba Amravati University, Amravati has been prepared under my supervision and guidance. It is also certified that:

- i. The candidate has satisfactorily conducted this research for not less than one academic year.
- ii. The dissertation is of sufficiently high standard to warrant its presentation for examination.

Date:

Place: Amravati

Mr. Mohit Rathod Sir  
(Supervisor)

Head  
Department of Commerce  
Sant Gadge Baba Amravati University

## 1. Introduction:-

Self Help group is a small association of village people, who are from same socio- economic background. They join together for the purpose of solving their common problem. The SHGs support in the financial status of its members. The SHGs promotes small saving among its members and the saving are kept with a bank. While Self Help might imply a focus on the individual. SHGs is the idea of mutual support – people helping each other. SHGs has the different purpose depending on the situation and needs. Like development sector, SHGs have been used as an effective strategy for poverty problem, human development and social empowerment and also focus on micro-credit programs and income generates.

Self-Help Group in short SHGs is now a well-known concept. It is now almost two decade old. It is reported that the SHGs have play an important role in the country's economic development. SHGs have now considered as a movement. Mainly, members of the SHGs are women. Consequently, participation of women in the country's economic development is increasing. They also play an important role in elevating the economic status of their families. This has led boost to the process of women's empowerment.

Bangladesh has been acknowledged as a pioneer in the field of micro-finance. Dr. Mahmud Yunus, Professor of Economics in Chitgaon University of Bangladesh, will be an initiator of an action research project 'Grameen Bank'. The project started in 1976 and it will be formally recognized as a bank through an ordinance, issued by the government in 1983. Even then it does not have a scheduled status from the Central bank of the country, the Bangladesh Bank. The Grameen Bank provides loans to the landless poor, particularly women, to promote self-employment.

Bangladesh Rural Advancement Committee (BRAC), Association for Social Advancement (ASA) and PROSHIKA are the other principal Micro-credit Finance Institutions (MFIs) operating for over two decades and their activities are spread in all the districts of that country.

The micro-finance practices of these institutions revolve around five basic features. Firstly, these institutions primarily have women as their target group. Secondly, they adopt group approach for achieving their targets. The group approach focuses on



# हृदपार होत असलेली मायाळू



**फलों**वर, भेंडी, कोबीसह काही मोजक्या भाज्यांनी बाजारपेठा ताब्यात घेतल्याने पिढ्यान्पिढ्या खाल्या जाणाऱ्या अनेक स्थानिक भाज्या बघता बघता शहरांमधून नाहीशा झाल्या. गॅलरीत, गच्चीवर, बागेत लावले जाणारे कारले, पडवळाचे वेलही कमी झाले. हरवत चाललेल्या भाज्यांमध्ये मायाळूचेही नाव घ्यावे लागेल.

जीवनसत्त्वांनी अतिशय समृद्ध, विशेषतः अ आणि क जीवनसत्त्वांचा खजिनाच म्हणावा, अशी ही अफलातून भाजी. मायाळू हा भारतभर सर्वत्र आढळणारा खाद्यवेल. बहुवर्षायु आणि बहुशाखीय असा हा वेल कोणत्याही प्रकारच्या जमिनीत आणि उष्णकटीबंधीय हवामानात सहज वाढतो. कुंडीत, छोट्या जागेत, गच्चीवर, बाल्कनीत किंवा अगदी खिडकीतही तो वाढतो. ही भाजी म्हणजे कालवणाची चटकन होणारी पौष्टिक सोय.

मायाळूला काही भागात वेलबोंडी किंवा पोई, पुई असेही म्हणतात. संस्कृतमध्ये उपोदकी आणि पोतकी अशी नावे आहेत. इतर भाषांमध्ये पोथीनी भाजी, विळ्ळिवासळे, वेल्लपचलै अशा वेगवेगळ्या नावाने ओळखले जाते. आयुर्वेदामध्ये मायाळूचे अनेक औषधी उपयोग सांगितले आहेत. 'धन्वंतरी निघण्टू'मध्ये या वेलावर सुभाषितही वाचायला मिळते.

अंगावर पित्त उठते, त्यावेळी मायाळूच्या पानाचा रस चोळतात. त्वचेची खाज, आग कमी करण्यासाठी मायाळूची भाजी खायला देतात. त्रास न होता सारक म्हणून पोट साफ होण्यासाठी मायाळूच्या पानांचा रस गर्भवतींना, त्याचप्रमाणे बालकांना देण्यासही योग्य असल्याचे 'धन्वंतरी निघण्टू'मध्ये सांगितले आहे. मायाळूच्या पानांची भाजी, भजी

अप्रतिमच होतात. लसणाची फोडणी दिलेली घट्ट भाजी, आळू-पालकसारखी दाणे, ताक घालून पातळ भाजीही केली जाते. मायाळूच्या वेलाचे सगळेच भाग खाण्यायोग्य, पौष्टिक असतात. त्याच्या रसाळ फळातील तांबडा, जांभळा रस लिंबाच्या सरबतात घातल्यास त्याला सुंदर, लालसर गुलाबी, जांभळा रंग येतो. शिक्क्यांची जांभळी शाई बनवण्यासाठी ही फळे वापरतात. या भाजीला शहर वातावरणातही टिकवून ठेवण्यासाठी शक्य असेल त्यांनी या भाजीचा वेल लावावा

- प्रा. श्री. द. महाजन





संत गाडगेबाबा अमरावती विद्यापीठ, अमरावती.

श्री दादासाहेब गवई चॅरिटेबल ट्रस्ट द्वारा संचालित  
तक्षशिला महाविद्यालय, अमरावती.



“किल्ल्यांचे ऐतिहासिक महत्व आणि वैभव”

(विशेष संदर्भ: महाराष्ट्रातील निवडक किल्ले)

संत गाडगेबाबा अमरावती विद्यापीठाच्या मानवविज्ञान शाखेअंतर्गत इतिहास  
विषयातील पदव्युत्तर पदवी परीक्षेच्या अभ्यासक्रमाची आंशिक पूर्तता  
करण्यासाठी प्रस्तुत संशोधन प्रकल्प अहवाल संत गाडगे बाबा अमरावती  
विद्यापीठास सादर करण्यात येत आहे.

संशोधन प्रकल्प अहवाल

(एम. ए. - भाग- 2 सेमिस्टर- IV)

संशोधनकर्ती

कु. समिक्षा किशोर वाघमारे

एम.ए भाग -२ (इतिहास)

मार्गदर्शक

डॉ. प्रवीण वानखडे

(इतिहास विभाग प्रमुख)

शैक्षणिक सत्र

२०२३-२०२४